# DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

# LAKE TROPHIC DATA

#### MORPHOMETRIC:

Lake: BEAN POND	Lake Area (ha):	4.17
Town: OSSIPEE	Maximum depth (m):	10.9
County: Carroll	Mean depth (m):	4.3
River Basin: Saco	Volume (m³):	178500
Latitude: 43°45'35" N	Relative depth:	4.8
Longitude: 71°14'00" W	Shore configuration:	1.24
Elevation (ft): 1325	Areal water load (m/yr)	: 5.69
Shore length (m): 900	Flushing rate (yr <sup>-1</sup> ):	1.30
Watershed area (ha): 44.3	P retention coeff.:	0.63
<pre>% watershed ponded: 0.0</pre>	Lake type:	natural

BIOLOGICAL:	20 February 1992	22 July 1991
DOM. PHYTOPLANKTON (% TOTAL) #1	RHIZOSOLENIA 60%	UROGLENOPSIS 55%
#2	DINOBRYON 20%	PERIDINIUM 25%
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		2225
CHLOROPHYLL-A (µg/L)		4.17
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 62%	KERATELLA 27%
#2	POLYARTHRA 25%	CONOCHILUS 14%
#3		
ROTIFERS/LITER	153	72
MICROCRUSTACEA/LITER	0	30
ZOOPLANKTON ABUNDANCE (#/L)	157	105
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		3.6
BOTTOM DISSOLVED OXYGEN (mg/L)	2.0	0.5
BACTERIA (fecal col., #/100 ml) #1		< 10
#2	·	< 10
#3		

#### SUMMER THERMAL STRATIFICATION:

#### stratified

Depth of thermocline (m): 4.0 Hypolimnion volume  $(m^3)$ : 24000 Anoxic volume  $(m^3)$ : 26500

CHEMICAL:			BEAN PONI	D		
	20 Febru	uary 1992	22	July 1991		
DEPTH (m)	3.0	6.0	2.5		7.5	
pH (units)	5.7	5.7	6.6		6.0	
A.N.C. (Alkalinity)	2.2	2.4	2.0		3.8	
NITRATE NITROGEN	< 0.02	0.02	< 0.05		< 0.05	
TOTAL KJELDAHL NITROGEN						
TOTAL PHOSPHORUS	0.008	0.005	0.008		0.019	
CONDUCTIVITY (µmhos/cm)	20.4	20.6	17.9		24.4	
APPARENT COLOR (cpu)	19	21	18	, <u></u>	38	
MAGNESIUM			0.23			
CALCIUM			1.3			
SODIUM			1.2			
POTASSIUM			0.50			
CHLORIDE	< 3	< 3	< 2		< 2	
SULFATE	4	4	3		2	
TN : TP						
CALCITE SATURATION INDEX			4.3			

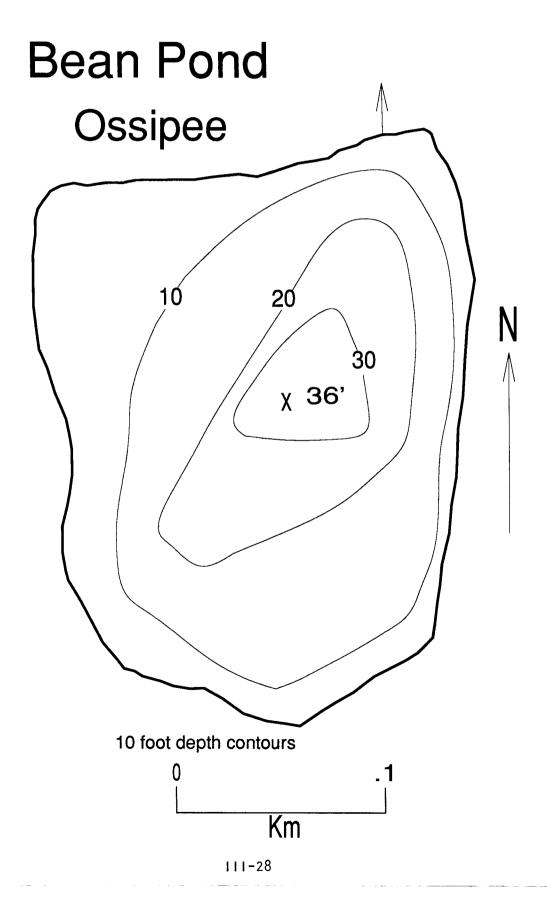
All results in mg/L unless indicated otherwise

# TROPHIC CLASSIFICATION: 1991

•	D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
	6	2	1	1	10	Meso.

### **COMMENTS:**

- 1. This is a remote pond that was surveyed cooperatively with the N.H. Fish and Game Department.
- 2. The pond level was down 2 to 3 feet because of disrepair of the beaver dam. There was much timber down in and around the edge of the pond due to beaver activity.
- 3. Blue-greens (70%) were the dominant class of wholewater plankton with Merismopedia (70%) the dominant genera.



#### FIELD DATA SHEET

LAKE: BEAN POND

DATE: 07/22/91

TOWN: OSSIPEE

WEATHER: SUNNY & WARM

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	26.0	7.7	94 %
1.0	25.5	7.7	92 %
2.0	24.0	8.4	99 %
3.0	20.0	10.1	111 %
4.0	14.5	11.2	108 %
5.0	9.5	9.6	82 %
6.0	7.0	0.1	1 %
7.0	6.0	0.1	1 %
8.0	6.0	0.2	2 %
9.0	6.0	0.2	2 %
10.0	6.0	0.5	4 %
10.5	6.0	0.5	4 %
		387.11	

SECCHI DISK (m): 3.6 COMMENTS:

BOTTOM DEPTH (m): 10.8

TIME: 1055

\*Dissolved oxygen values are in mg/L

# Bean Pond Ossipee EENE F N N N PΥ N N N $^{N}$ N $_{N}$ N N N E 0 Km

111-30

#### AQUATIC PLANT SURVEY

LAK	E: BEAN POND	TOWN: OSSIPEE	DATE: 07/22/91	
P		NAME	ABUNDANCE	
Key	GENERIC	COMMON	ADUNDANCE	
E	Eriocaulon septangulare	Pipewort	Scattered	
F	Nymphoides cordatum	Floating heart	Sparse	
N	Nymphaea	White water lily	Scattered	
P	Pontederia cordata	Pickerelweed	Sparse	
Т	Typha	Cattail	Sparse	
ับ	Utricularia	Bladderwort	Common/Abun	
W	Potamogeton spp.	Thin-leaved pondweed	Common/Abun	
Y	Nuphar	Yellow water lily	Scattered	
		OVERALL ABUNDANCE:	Scattered	

# **GENERAL OBSERVATIONS:**

- 1. Although not depicted on the map, bladderwort and pondweed were observed over most of the visible bottom. It may be over much of the pond bottom.
- 2. The overall rating is primarily for the emergent plants and not for the plants along the bottom.